

# In Focus:

## Children, climate change and environmental degradation

Working towards a clean, healthy and sustainable environment for every child

OCTOBER 2024



## Children are affected disproportionately by climate change, but investing in adaptation and mitigation solutions benefits everyone.

The triple planetary crisis of climate change, environmental pollution and biodiversity loss has put virtually every child in the world at risk. Around 1 billion children – nearly half of the world’s 2.2 billion children – now face extreme risks to their ability to survive, grow and thrive.

Almost 160 million children across Europe and Central Asia are vulnerable to the impacts of climate change and environmental degradation. Children are also affected disproportionately by these risks, which threaten almost every aspect of their health and well-being at all stages of their development, from their mother’s pregnancy to the first weeks of life, and from their school years into young adulthood.

They are hit first and hardest by every type of climate and environmental risk. These include extreme weather events, such as heatwaves, floods, sandstorms, mudslides and landslides, but also slow-onset changes triggered by climate change, such as drought, desertification and water scarcity. Children also face the ever-present challenges of air pollution, lead pollution, pesticide pollution, deteriorating water quality and energy poverty.

Many children across the region face overlapping risks, with conflict, poverty, climate change and environmental degradation reinforcing and compounding each other to devastating effect. These crises only add to the marginalization of children, families and communities that are excluded and sidelined, including children with disabilities, who already face challenges in accessing basic services such as education, safe water and sanitation.

The combined impact of these crises on children demands a combined response. Yet children are often treated as an afterthought in the response to climate change and environmental degradation. UNICEF works to ensure that they are front and centre. As well as being the most vulnerable to the climate crisis and ongoing environmental degradation, children also represent our greatest hope for lasting solutions. Measures that address their vulnerability benefit them, their families and communities, and support the global pursuit of the Sustainable Development Goals.

# 01

## Key facts

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# 160 million

Nearly 160 million children in Europe and Central Asia live in countries at medium to high risk of exposure to a wide range of hazards, shocks and stresses related to climate change and environmental degradation, according to UNICEF's Children's Climate and Environment Risk Index.



Air pollution inside homes has been linked to almost two-thirds of the neonatal deaths related to the lack of clean air.

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# 6,400

In 2021, around 6,400 children and teenagers in 23 countries across Europe and Central Asia died prematurely as a result of causes attributable to air pollution. The vast majority – almost 5,500 – died before their first birthday.



The top three environmental health risk factors for children under the age of five in the region are air pollution, extreme heat or cold, and poor water quality.

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# 1/2

Around 1 in 2 children in the region face frequent heatwaves – double the global average of 1 in 4. 2023 was Europe's second warmest year in recorded history: for some countries in southwestern Europe, it was the warmest.



Around half of all children in the region are exposed to pesticide pollution.

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# 1/10

Around 1 child in every 10 lives in an area prone to river flooding.



Only two thirds of schools in Central Asia have a basic drinking water service.



SUSTAINABLE DEVELOPMENT GOALS (2030)

### SDG 13

Take urgent action to combat climate change and its impacts



#### Target 13.2

Integrate climate change measures into national policies, strategies, and planning.

#### Target 13.3

Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

#### Convention on the Rights of the Child (1989)

The Convention acknowledges the right to a clean, healthy and sustainable environment:

- **Article 6:** children have the right to the highest attainable standard of health
- **Article 24:** 'taking into consideration the dangers and risks of environmental pollution'
- **Article 27:** an adequate standard of living
- **Article 29:** education, including the development of respect for the natural environment.

#### CRC/C/GC/26: General Comment No. 26 (2023) on Children's Rights and the Environment with a Special Focus on Climate Change

States can be held accountable not only for environmental harm within their borders, but also for the harmful impacts of environmental damage and climate change beyond their borders. The Comment

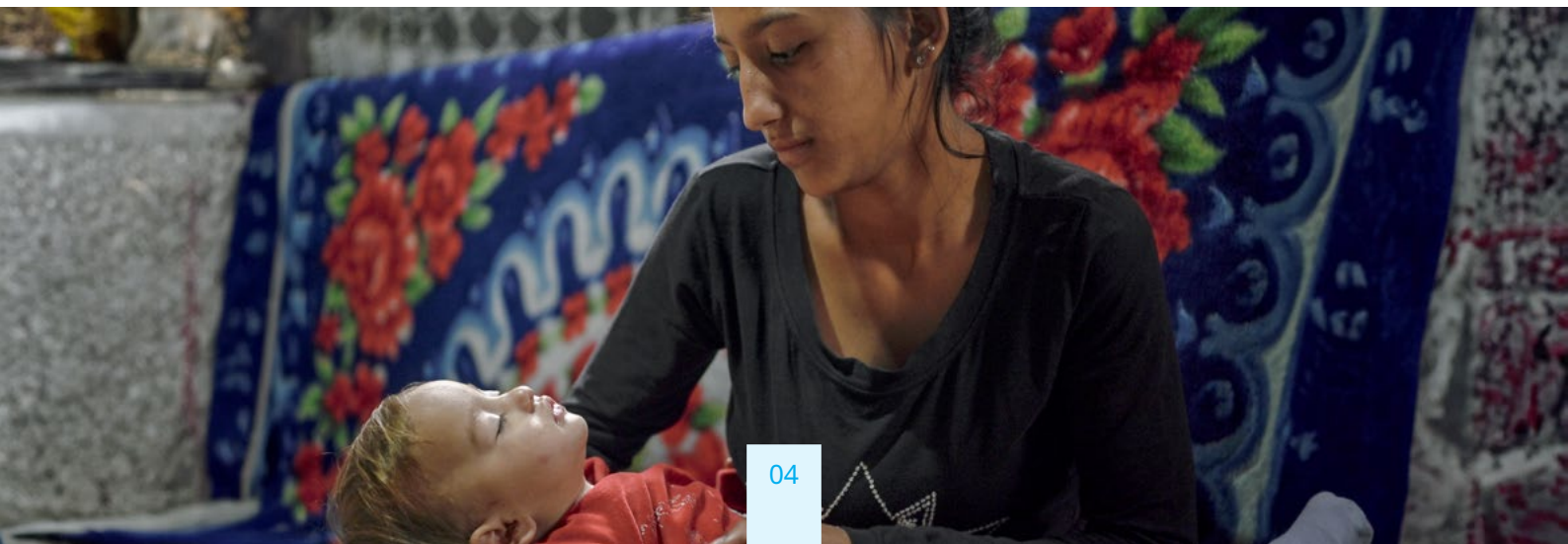
also calls for a focus on the disproportionate harm faced by disadvantaged children.

#### Intergovernmental Declaration on Children, Youth and Climate Action (2019)

The Intergovernmental Declaration on Children, Youth and Climate Action was adopted in 2019 at the 25th Conference of the Parties (COP25) in Madrid by a group of world leaders and youth activists. The first commitment to accelerate inclusive, child and youth-centred climate policies and action at national and global levels has been signed by more than 50 countries (as of October 2024).

**Below:** © UNICEF/UNI556805/Nimani

Leontina, 19, watches her daughter while she sleeps in her arms in their home in Gazi Baba, Skopje, North Macedonia. Songjul, 1, has a wheezing sound in her chest when she breathes which is aggravated by high levels of air pollution. Families facing multiple deprivations are disproportionately affected by air pollution and suffering the most. "She has some kind of pulmonary disease," says Leontina. "She's been like this for a month. I worry about her the most when she's sleeping." *March 2024.*





### Challenges for children

**Children are the most vulnerable to the direct physical impact** of climate change and environmental degradation. They are, for example, particularly vulnerable to air pollution because they breathe twice as fast as adults and take in more pollutants, and because their organs are still developing. And the younger they are, the greater the risks: in 2021, 85 per cent of those under the age of 20 in Europe and Central Asia who died from causes attributable to air pollution died before their first birthday – deaths that could have been prevented if they had clean air to breathe. Children are also affected disproportionately by the impacts of poor water quality and scarcity. These include heightened risks of waterborne diseases like diarrhoea, a leading cause of childhood mortality.

**Children are the most vulnerable to the wider impacts.** These include the loss of education during school closures, and the loss of income that pushes families into poverty. The World Bank's updated Groundswell report finds that climate change could force five million people in Europe and Central Asia to move within their countries by 2050.

**Children are the most vulnerable socially.** The combined impact of climate change and environmental degradation adds to the social exclusion of children who are already marginalized, including the estimated 22 million children in the region who are living in poverty, those affected by migration and those from ethnic minorities.

### Challenges for the region

**A continued reliance on fossil fuels.** Carbon dioxide (CO<sub>2</sub>) emissions per capita in Europe and Central Asia are higher than the global average. Many economies are heavily industrialized and continue to rely on coal and other fossil fuels for household energy consumption.

This imposes a heavy burden on environmental health: air pollution caused by the use of fossil fuels for heating and cooking – in the absence of clean, renewable forms of energy – is the greatest environmental health risk for children in the region. In addition, children in lower-income households have less access to clean energy.

**Energy poverty.** Millions of children across the region experience energy poverty. In Europe, this is driven by high energy prices, energy inefficiency, poor housing insulation and low incomes, with the poorest households either spending a disproportionate share of their income on energy bills or switching the heating off.

**A lack of prioritization for social services in climate action.** Social protection, health, education and water, sanitation and hygiene (WASH) services are crucial for adaptation to a changing climate and reduction of emissions. Yet climate action does not yet address the disproportionate impact of climate change on children and the critical role of these services in safeguarding children's health and resilience against climate impacts.

**A lack of disaggregated data** on the impact of climate change and disasters on children. The lack of data hampers the understanding and management of the risks faced by children, young people, families and their communities as a result of climate change and environmental degradation.

**Extreme weather events.** Children are exposed to more frequent and intense extreme weather events, such as flooding, mudslides, sandstorms, heatwaves and wildfires. According to the EU's Copernicus Earth observation programme, 2023 was the hottest year in recorded history, particularly for some countries in southwestern Europe. Yet national systems, including Early Warning Systems (EWS) often lack a dedicated focus on children that would ease the impact of more severe and frequent shocks and stresses on their lives.

**A lack of education** on climate change, environmental degradation and disaster risk reduction. Education is crucial for climate change mitigation and adaptation, yet children across the region are not yet equipped with adequate knowledge and skills to support the transition to greener economies. Education systems need to be able to prevent and mitigate the risks of climate-related disasters, which will, in turn, protect the right of every child to education – a virtuous circle.

**A lack of recognition of children's vulnerability and their role in solutions.** Even though children are

hit first and hardest by the impact of climate change and environmental hazards, they are often overlooked in the development and implementation of crucial climate-change strategies and policies. The disproportionate impact of climate change on children is often missing from Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs): the strategies that set out each country's commitments to the 2015 Paris agreement to hold global warming below 1.5°. And they have few opportunities to play an active role in climate change mitigation and adaptation efforts.

#### UNICEF'S GOAL

**By 2030, galvanize regional and national movements to enhance the lives of children, particularly the most vulnerable, through scaled-up programmes and partnerships to safeguard their right to a clean, healthy and sustainable environment.**

To achieve this, investment of US\$100 million is needed each year for child-centred policy measures and programmes that aim to protect and empower children and reduce the risks they face.

**Below:** © UNICEF/UNI552846/Asymov

A nurse helps a child to breathe at the National Centre for Maternal and Child Health in Bishkek, Kyrgyzstan – an illustration of the impact of the city's air pollution on its children. *March 2024.*





## BOX 1

### Tajikistan: Building resilience in schools

Tajikistan is the most disaster-prone and climate-vulnerable country in Central Asia: over three million of its children live with the ever-present risks posed by climate change and natural disasters. Avalanches, earthquakes, floods, mudflows and landslides threaten their basic rights and their survival, and prevent them from reaching their full potential.

Askarova Nuqra, aged 14, lives in Shul village in the mountainous Rasht district, and is the leader of the School Disaster Management Team at School #2. This initiative, supported by UNICEF and the Red Crescent Society of Tajikistan, covers 12 schools across high-risk areas in Rasht and the Gorno-Badakhshan Autonomous Oblast. It aims to enhance the knowledge and skills of Tajik children, young people and their communities to build climate change resilience through the child-centred 'Disaster Risk Reduction and School Safety' programme funded by USAID's Bureau for Humanitarian Assistance.

As leader of the School Disaster Management Team, Nuqra provides peer-to-peer training on disaster risk reduction, emergency preparedness and first

aid to her peers. She also spreads awareness on preparedness during disasters through information sessions in her local community. "I am proud to be part of the School Disaster Management Team," she says, "because I'm helping my classmates, my family and my community to become more resilient to disasters and climate change."

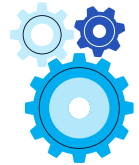
UNICEF and its partners are working with the Government to scale up child-centred disaster risk reduction (DRR) and climate change adaptation (CCA) at national and local levels. This includes strengthening coordination, monitoring and capacity, and improving resilience to disasters and climate change in selected schools. UNICEF continues to advocate for the participation of children and young people in DRR and CCA by enhancing their understanding of the risks, and by putting their needs, competencies and skills at the heart of adaptation and mitigation planning and implementation.

**Above:** UNICEF/UN0635996/Babajanyan VII Photo  
Aerial view of Sultonobod village, Tajikistan. March 2022.



# 04

## UNICEF's work for children



UNICEF aims to protect the lives, health and well-being of children and the resilience of their communities by supporting their long-term development and the adaptation of essential social services – including social protection, health, WASH and education – to a changing climate and a degrading environment.

### Support for climate change education and sustainable schools

We support climate change education across the region, recognizing that children benefit from teachers who have relevant knowledge and skills and from learning in greener schools. We reach children in kindergarten, primary and secondary education with educational materials on sustainability and climate change both inside and outside the classroom. And we support governments to integrate climate change into the education system, as well as community-wide efforts to embed sustainable development in both formal and non-formal education and skills training. We also:

- promote the integration of climate change education into curricula, providing students and teachers with the knowledge, educational standards, skills and attitudes to cope with profound change and shape innovative adaptation and mitigation solutions
- develop educational materials on climate change and green skills to help build a workforce that is prepared for a low-carbon economy
- build the capacity of all teachers through teacher training
- protect school facilities and build sustainable and green schools that can withstand the impact of climate-induced hazards. The Comprehensive School

Safety Framework, for example, offers governments a way to protect children and schools from all risks and hazards in the education sector.

### Support for environmental health

UNICEF supports tangible measures to improve environmental health at household and national level. Our support includes providing evidence-based information on the disproportionate impact of air pollution, lead pollution, water pollution and extreme temperatures on young children; supporting the development of policy and regulations that prioritises solutions to reduce and prevent exposure of pollutants on children including air quality plans, regulation on lead; building capacity of pediatricians and health care professionals; raising awareness; air quality monitoring in schools; and guidance on how to improve indoor air quality; supporting development of standard operating procedures for schools and kindergartens. We advocate for and support national environmental health programmes that protect children's health from the impact of pollution and other environmental risks. We also support energy efficiency and transition from fossil fuel to renewable energy targeting schools and health care facilities including improved insulation, ventilation, installing heat pumps and solar panels and supporting access to safe water, sanitation, and hygiene services. We also support improved management of medical waste to curtail the risk of harmful substances impacting the health of children.

**Above:** UNICEF/UNI556839/Nimani

Children take part in a workshop at the Botanical Garden in Skopje, North Macedonia. UNICEF is working with the Government and partners to support the integration of climate change education, with a focus on air quality, into existing curricula; developing new education materials for every stage of education from preschools to secondary education; and providing teacher training for the effective delivery of knowledge to pupils. *March 2024.*

## Support for family finances

Given the increasing risks, UNICEF works with governments to strengthen shock-responsive social protection systems to provide financial support to exposed families. We are also exploring linking these systems to innovative climate finance solutions, including the use of parametric insurance in Tajikistan, where payouts are triggered by weather-based events, such as heatwaves. Examples of such insurance are growing worldwide, and can support government-led efforts to scale up social assistance programmes and protect children and their families.

## Support for early warning systems

As well as enhancing child and community resilience by supporting early warning systems (EWS), we advocate for greater investment in such systems. These include heat-alert systems that are based on temperatures or heat advisories issued by the national weather service or other governmental agencies that provide weather forecasts and warnings. Social protection, including the use of cash transfers in response to heat-related hazards, can then be scaled up to help people cope with the immediate impacts of heatwaves and build up their resilience to future crises.

In Tajikistan, for example, UNICEF and its partners support the Government and communities to introduce or adapt EWS to ensure that they work for children, families and communities. UNICEF is working towards

developing guidance on how to make the whole EWS system child-responsive, with considerations across disaster risk knowledge, monitoring and forecasting, warning dissemination and communication, and preparedness and response capabilities.

## Support for robust data

UNICEF provides data and evidence on the disproportionate impact of climate change on children and on the best solutions for their protection, including through collaboration with our partners on the Children's Climate Risk Index-Disaster Risk Model (CCRI-DRM). The CCRI-DRM assesses climate and disaster risk at sub-national level to inform collective action.

## Empowering children and youth to take action on climate change

UNICEF works to empower every child throughout their childhood and adolescence by giving them the developmental opportunities, education and skills they need to become champions for the environment. We provide guidance and resources to help children and young people develop their skills and take the lead on key issues, such as resource consumption, pollution, energy efficiency, renewable energy, waste management, water conservation and management, tree planting and the protection of biodiversity.

### BOX 2

## Youth action drives change in Bosnia and Herzegovina

In Bosnia and Herzegovina, after youth submitted an official request and met with the Minister for the Environment in Tuzla, the Ministry decided to develop an Air Quality Action Plan for the Canton with a focus on children and a dedicated budget. As a result, more than 440,000 citizens, including nearly 60,000 children, will benefit from the Canton's air quality action plan.



# 05 Call to action

**Children must be at the heart of policies and action on climate change and environmental degradation.** Too often, their specific needs – and their potential for sustainable solutions – are overlooked. We want greater recognition of children as a vulnerable group that needs special protection and investment, recognition of their crucial role as agents of change, and recognition of the need to strengthen the essential services they rely on, including education, social protection, WASH and health.

UNICEF calls for:

- Nationally Determined Contributions 3.0, National Adaptation Plans and Disaster Risk Reduction plans that recognize the disproportionate impact of climate change on children and that include provisions for targeted climate change adaptation and mitigation solutions in education, social protection and health
- The prioritization of interventions based on robust evidence, such as UNICEF's Children's Climate Risk Index (CCRI), to ensure that policies and interventions recognize and are tailored to the specific needs of children.
- The empowerment of children and youth as agents of change who participate in data collection, policy-making, and community-based initiatives, and who have the education and tools they need to become climate leaders. This means creating more spaces to engage children and young people, including those with disabilities, on national climate policies and strategies, and more support for their proposed solutions.
- Promoting climate resilient education, health and social protection policies.
- Investment in green and climate-resilient infrastructure, including schools, healthcare facilities and water systems that are energy efficient and built to withstand extreme weather conditions.
- Strengthen shock-responsive social protection, parametric insurance schemes and cash assistance programmes to support vulnerable people during climate-related events.
- Greater support for children's health through investment in access to clean energy, the creation of 'pollution-free' areas, and reducing their exposure to pollution in kindergartens, schools and residential areas.

Finally, we call on every government in Europe and Central Asia to sign the Intergovernmental Declaration on Children, Youth and Climate Action, and stand ready to support governments in fulfilling their commitments as signatories.

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## High returns on investment



Every \$1 invested in climate adaptation can result in up to \$10 in net economic gains.

Image: Unsplash/bernd dittrich

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**for every child**